



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/810,186

03/26/2004

Rajendra Tushar Moorti

15624US02

8020

23446 7590 12/05/2007  
MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

YUN, EUGENE

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

12/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/810,186

Applicant(s)

MOORTI ET AL.

Examiner

Eugene Yun

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiben et al. (US 5,465,410).

Referring to Claim 1, Hiben teaches a method for choosing at least one signal path, the method comprising:

Determining a signal quality metric for each of a plurality of signal paths (see col. 2, lines 33-43);

Modifying the signal quality metric for each of the plurality of signal paths (see col. 3, lines 62-67); and

Selecting at least one signal path based on the at least one modified signal quality metric (see col. 4, lines 3-8).

Referring to Claim 13, Hiben teaches a machine-readable storage having stored thereon, a computer program having at least one code station for choosing at least one signal path, the at least one code station being executable by a machine for causing the machine to perform steps (see ABSTRACT) comprising:

Determining a signal quality metric for each of a plurality of signal paths (see col. 2, lines 33-43);

Modifying the signal quality metric for each of the plurality of signal paths (see col. 3, lines 62-67); and

Selecting at least one signal path based on the at least one modified signal quality metric (see col. 4, lines 3-8).

Referring to Claim 25, Hiben teaches a system for choosing at least one signal path, the system comprising:

At least one processor that determines a signal quality metric for each of a plurality of signal paths (see col. 2, lines 33-43);

The at least one processor modifies the signal quality metric for each of the plurality of signal paths (see col. 3, lines 62-67); and

The at least one processor selects at least one signal path based on the at least one modified signal quality metric (see col. 4, lines 3-8).

Referring to Claims 2, 14, and 26, Hiben also teaches cycling through at least one of the signal paths (see col. 7, lines 7-12).

Referring to Claims 3, 15, and 27, Hiben also teaches biasing the signal quality metric for each of the signal paths (see col. 3, lines 62-67).

Referring to Claims 4, 16, and 28, Hiben also teaches increasing the signal quality metric for each of the plurality of signal paths by a fixed amount (see col. 3, lines 62-67).

Referring to Claims 5, 17, and 29, Hiben also teaches increasing the signal quality metric for each of the plurality of signal paths by a predetermined amount (see col. 3, lines 62-67).

Referring to Claims 6, 18, and 30, Hiben also teaches dynamically changing the signal quality metric for each of the plurality of signal paths (see col. 2, lines 42-47).

Referring to Claims 7, 19, and 31, Hiben also teaches decreasing the signal quality metric for each of the plurality of signal paths by at least one of a fixed amount and a predetermined amount (see col. 3, lines 62-67).

Referring to Claims 8, 20, and 32, Hiben also teaches selecting a signal path with a signal quality metric greater than at least one modified signal quality metric (see col. 4, lines 3-8).

Referring to Claims 9, 21, and 33, Hiben also teaches selecting a signal path with a signal quality metric less than at least one modified signal quality metric (see col. 4, lines 3-8).

Referring to Claims 10, 22, and 34, Hiben also teaches at least one of a power level characteristic, a packet error rate characteristic, a bit error rate characteristic, a propagation channel characteristic, and an interference level characteristic (see col. 3, lines 38-44).

Referring to Claims 11, 23, and 35, Hiben also teaches at least one of the signal paths comprising an antenna (see 102 in fig. 1).

Referring to Claims 12, 24, and 36, Hiben also teaches a receive signal path (fig. 1) and a transmit signal path (see col. 4, lines 52-57).

***Response to Arguments***

3. Applicant's arguments filed 10/1/2007 have been fully considered but they are not persuasive.

The applicant argues that the Hiben reference does not teach "modifying the signal quality metric for each of the plurality of signal paths". Modifying the signal quality metric is, according to the examiner, the same as changing the signal quality metric. In the cited passage, there is an indication of maximizing the signal quality metric, which is in fact, the same as changing the signal quality metric.

In addition, the examiner believes that the signal quality metrics of the Hiben reference are modified from the results of the filter outputs. The examiner can state that the filters can affect or modify how the signal quality metric is generated since the claims do not state a specific method or time period in which the signal quality metric is modified.

For the above reasons, the examiner stands by his rejection.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (571) 272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MATTHEW ANDERSON  
SUPERVISORY PATENT EXAMINER



Eugene Yun  
Examiner